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APPLICANT : SUMITOMO SPECIAL METALS CO LTD;

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TITLE : RARE-EARTH MAGNET EXCELLENT IN CORROSION RESISTANCE

ABSTRACT : PURPOSE: To obtain a permanent magnet being excellent in corrosion resistance, by specifying the composition of an Fe-B-R permanent magnet material and by applying simple surface treatment thereto.

CONSTITUTION: A sintered substance having a tetragonal crystal structure as a main phase is made of Nd 11~15 atom % and Dy 0.2~3 atom %, the total quantity of which is 12~17 atom %, and further B 5~8 atom %, CoO 0.5~13 atom %, Al 0.5~4 atom %, C 1000ppm or less and Fe and inevitable impurities as the rest. Magnet characteristics are improved further by making the substance contain Ti or Nb of 0.1~1 atom % in addition. A film prepared by mixing a rust-proof pigment in epoxy resin or the like is formed and baked on the surface of said sintered substance. The film thickness is preferably 25 μm or less. In addition, it is advisable to provide a ground film of phosphate. According to this constitution, a magnet being excellent in corrosion resistance can be obtained.

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